

REMARKS:

Claims 1-4, 7-10, 13-16, 18-21, 23-30, 32, and 38-44 are currently pending in the present application. Claims 1-3, 7, 25, 27, 28, and 41 stand rejected under 35 U.S.C. § 102(b) over U.S. Patent 5,439,082 to McKeown et al. ("McKeown"). Claim 8 stands rejected under 35 U.S.C. § 103(a) over McKeown in view of E.P. Publication No. 0537927 ("EP '927"). Claims 9, 26, 38, and 39 stand rejected under 35 U.S.C. § 103(a) over McKeown in view of U.S. Patent 5,906,254 to Schmidt et al. ("Schmidt"). Claims 10, 13, 15, and 17-20 stand rejected under 35 U.S.C. § 103(a) over McKeown in view of U.S. Patent 5,458,222 to Pla et al. ("Pla"). Claim 14 stands rejected under 35 U.S.C. § 103(a) over McKeown in view of Pla, and in further view of EP '927. Claims 16, 21, 23, 24, 29, 30, and 32 stand rejected under 35 U.S.C. § 103(a) over McKeown in view of Pla, and in further view of U.S. Patent 5,520,375 to Leibach et al. ("Leibach"). Claims 16, 23, and 24 stand rejected under 35 U.S.C. § 103(a) over McKeown in view of Leibach.

Claims 1-4, 7-10, 13-16, 18-20, 29, 30, 32, 38-44 are hereby cancelled to expedite prosecution. Claims 21, 23-25, and 28 to more particularly point out distinctly claim the invention.

Rejections Under 35 U.S.C. § 102(b):

Claims 1-3, 7, 25, 27, 28, and 41 stand rejected under 35 U.S.C. § 102(b) over McKeown. Claims 1-3, 7, and 41 are hereby cancelled, thus the rejection of Claims 1-3, 7, and 41 is considered moot. The rejection of Claims 25, 27, and 28 is respectfully traversed herein.

Claims 25 and 27

Claim 25 is an independent claim, and Claim 27 depends from Claim 25. Accordingly, the following remarks made in connection with Claim 25 apply equally to Claim 27.

McKeown discloses a vibration isolator which uses an inductance coil (67) which applies a magnetic force to the tuning slug (33). The magnetic force acting upon the

tuning slug (33) affects the acceleration and deceleration of tuning slug (33), so as to provide for a change to the isolation frequency (Col. 7, lines 14-23). It is important to note that tuning slug (33) is constructed out of magnetic material, such that inductance coil (67) produces a forced directly upon the tuning slug (33).

In contrast, Claim 25, as currently amended, includes a vibration isolator comprising a second multistage piston resiliently disposed within a second housing. The Applicant does not agree Examiner's argument that the tuning slug in McKeown can be equated with the multistage piston of Claim 25. Notwithstanding, Claim 25 is hereby amended to clarify that the multistage piston is disposed within a second housing. McKeown clearly does not disclose a second housing. Furthermore, Claim 25 requires at least one actuator coupled to the second, multistage piston for selectively transferring forces to the multistage piston. McKeown clearly does not disclose an actuator coupled to a second multi-stage piston. Even if the tuning slug in McKeown were to be construed as a multistage piston, the coils (67) are not coupled to the slug. For at least these reasons, the Applicant submits that Claim 25 is not anticipated by McKeown.

Claim 27 depends from Claim 25. Accordingly, the remarks above in connection with Claim 25 apply equally to Claim 27. That is, McKeown cannot anticipate Claim 27 at least for the reason set forth above in regards to Claim 25.

Accordingly, since McKeown fails to disclose all of the limitations of Claim 25, McKeown cannot anticipate Claim 25, or Claim 27, which depends from Claim 25. Therefore, it is respectfully requested that the rejection of Claims 25 and 27 under 35 U.S.C. § 102(b) be reconsidered and withdrawn. The Applicant respectfully requests that Claims 25 and 27 be allowed.

Claim 28

McKeown discloses a vibration isolator which uses an inductance coil (67) which applies a magnetic force to the tuning slug (33). The magnetic force acting upon the tuning slug (33) affects the acceleration and deceleration of tuning slug (33), so as to provide for a change to the isolation frequency (Col. 7, lines 14-23). It is important to note

that tuning slug (33) is constructed out of magnetic material, such that inductance coil (67) produces a forced directly upon the tuning slug (33).

In contrast, Claim 28, as currently amended, includes a vibration isolator comprising a multistage piston resiliently disposed within a first housing that is separate than a second housing. The Applicant does not agree Examiner's argument that the tuning slug in McKeown can be equated with the multistage piston of Claim 28. Notwithstanding, Claim 28 is hereby amended to clarify that the multistage piston is disposed within a first housing that is separate than the second housing. McKeown clearly does not disclose two separate housings, and their corresponding features. Furthermore, Claim 28 requires at least one actuator coupled to the multistage piston for selectively transferring forces to the multistage piston. Furthermore, Claim 28 is amended to require wherein the at least one actuator is configured to actively augment vibration attenuation of the vibration isolator. McKeown clearly does not disclose an actuator coupled to a multistage piston. Even if the tuning slug in McKeown were to be construed as a multistage piston, the coils (67) are not coupled to the slug. For at least these reasons, the Applicant submits that Claim 28 is not anticipated by McKeown.

Accordingly, since McKeown fails to disclose all of the limitations of Claim 28, McKeown cannot anticipate Claim 28. Therefore, it is respectfully requested that the rejection of Claim 28 under 35 U.S.C. § 102(b) be reconsidered and withdrawn. The Applicant respectfully requests that Claim 28 be allowed.

Rejections Under 35 U.S.C. § 103(a):

Claim 8 stands rejected under 35 U.S.C. § 103(a) over McKeown in view of EP '927. Claims 9, 26, 38, and 39 stand rejected under 35 U.S.C. § 103(a) over McKeown in view of Schmidt. Claims 10, 13, 15, and 17-20 stand rejected under 35 U.S.C. § 103(a) over McKeown in view of Pla. Claim 14 stands rejected under 35 U.S.C. § 103(a) over McKeown in view of Pla, and in further view of EP '927. Claims 16, 21, 23, 24, 29, 30, and 32 stand rejected under 35 U.S.C. § 103(a) over McKeown in view of Pla, and in further view of Leibach. Claims 16, 23, and 24 stand rejected under 35 U.S.C. § 103(a) over McKeown in view of Leibach.

Claims 8-10, 13-20, 29, 30, 32, 38, and 39 are hereby cancelled, thus the rejection of Claims 8-10, 13-20, 29, 30, 32, 38, and 39 is considered moot. The rejection of Claims 21, 23, 24, and 26 is respectfully traversed herein.

Claim 26

Claim 26 stands rejected under 35 U.S.C. § 103(a) over McKeown in view of Schmidt. The Examiner states that it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the magnetically actuated actuator of McKeown to have included a piezoelectric actuator, as taught by Schmidt in order to provide a functionally equivalent means of exerting force on the floating mass. At least because the proposed combination of McKeown and Schmidt fails to disclose or suggest all of limitations of Claim 25, the proposed combination of McKeown and Schmidt cannot render Claim 26 obvious.

Claim 26 depends from Claim 25. Accordingly, the remarks above in connection with Claim 25 apply equally to Claim 26. That is, McKeown cannot anticipate or render obvious Claim 26. Schmidt discloses a vibration absorber that can possibly integrate a piezoelectric actuator in order to supply a force supply. Schmidt, like McKeown fails to disclose a multistage piston in a second housing, as required by Claim 25, and therefore also fails to disclose the more specific limitations cited in Claim 26. Thus, McKeown and Schmidt, whether considered separately or in combination as proposed by the Examiner, fail to disclose or suggest all of the limitations of Claim 26.

In light of the remarks above, it is respectfully requested that the rejection of Claim 26 under 35 U.S.C. § 103(a) over McKeown in view of Schmidt be reconsidered and withdrawn.

Claims 21, 23, and 24

Claims 21, 23, and 24 stand rejected under 35 U.S.C. § 103(a) over McKeown in view of Pla, and in further view of Leibach. Claims 23 and 24 are dependent upon Claim 21, accordingly, the remarks below in connection with Claim 21 apply equally to Claims 23 and 24.

The Examiner states that it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the vibrations of McKeown, as modified, to have been harmonic, in view of the teachings of Leibach, in order to provide a means of eliminating imbalance associated with vibrations of a rotating device.

McKeown discloses a vibration isolator which uses an inductance coil (67) which applies a magnetic force to the tuning slug (33). The magnetic force acting upon the tuning slug (33) affects the acceleration and deceleration of tuning slug (33), so as to provide for a change to the isolation frequency (Col. 7, lines 14-23). It is important to note that tuning slug (33) is constructed out of magnetic material, such that inductance coil (67) produces a forced directly upon the tuning slug (33).

In contrast, Claim 21, as currently amended, includes a vibration isolator comprising a first tuning port and a second tuning port, both in the first tuning port and the second tuning port being in fluid communication with the first fluid chamber and the second fluid chamber. Claim 21 is further amended to clarify that the first tuning port allows isolation of harmonic vibration at a first selected frequency, while the second tuning port allows isolation of harmonic vibration at a second selected frequency. Claim 21 is further amended to clarify that the isolation of harmonic vibration at the first selected frequency is a result of displacement of the tuning fluid in the first tuning port, the displacement being a result of movement of the piston. Claim 21 is further amended to clarify that the isolation of harmonic vibration at the second selected frequency is a result of displacement of the tuning fluid in the second tuning port, the displacement being a result of movement of the piston. McKeown clearly fails to disclose these features.

Pla and Leibach, fail to cure the deficiencies of McKeown noted above. Thus, McKeown, Pla, and Leibach whether considered separately or in combination as proposed by the Examiner, fail to disclose or suggest all of the limitations of Claims 21. Furthermore, Claims 23 and 24 remain dependent upon Claim 21, thus McKeown, Pla, and Leibach, whether considered separately or in combination, fail to disclose to the limitations of Claims 23 and 24 at least for failing to disclose all the limitations of Claim 21.

In light of the remarks above, it is respectfully requested that the rejection of Claims 21, 23, and 24 under 35 U.S.C. § 103(a) over McKeown in view of Pla, and in further view of Leibach be reconsidered and withdrawn.

Claims 21, 23, and 24

Claims 21, 23, and 24 stand rejected under 35 U.S.C. § 103(a) over McKeown in view of Leibach. Claims 23 and 24 are dependent upon Claim 21, accordingly, the remarks below in connection with Claim 21 apply equally to Claims 23 and 24.

The Examiner states that it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the vibrations of McKeown, as modified, to have been harmonic, in view of the teachings of Leibach, in order to provide a means of eliminating imbalance associated with vibrations of a rotating device.

McKeown discloses a vibration isolator which uses an inductance coil (67) which applies a magnetic force to the tuning slug (33). The magnetic force acting upon the tuning slug (33) affects the acceleration and deceleration of tuning slug (33), so as to provide for a change to the isolation frequency (Col. 7, lines 14-23). It is important to note that tuning slug (33) is constructed out of magnetic material, such that inductance coil (67) produces a forced directly upon the tuning slug (33).

In contrast, Claim 21, as currently amended, includes a vibration isolator comprising a first tuning port and a second tuning port, both in the first tuning port and the second tuning port being in fluid communication with the first fluid chamber and the second fluid chamber. Claim 21 is further amended to clarify that the first tuning port allows isolation of harmonic vibration at a first selected frequency, while the second tuning port allows isolation of harmonic vibration at a second selected frequency. Claim 21 is further amended to clarify that the isolation of harmonic vibration at the first selected frequency is a result of displacement of the tuning fluid in the first tuning port, the displacement being a result of movement of the piston. Claim 21 is further amended to clarify that the isolation of harmonic vibration at the second selected frequency is a result

of displacement of the tuning fluid in the second tuning port, the displacement being a result of movement of the piston. McKeown clearly fails to disclose these features.

Leibach fails to cure the deficiencies of McKeown noted above. Thus, McKeown and Leibach, whether considered separately or in combination as proposed by the Examiner, fail to disclose or suggest all of the limitations of Claims 21. Furthermore, Claims 23 and 24 remain dependent upon Claim 21, thus McKeown and Leibach, whether considered separately or in combination, fail to disclose to the limitations of Claims 23 and 24 at least for failing to disclose all the limitations of Claim 21.

In light of the remarks above, it is respectfully requested that the rejection of Claims 21, 23, and 24 under 35 U.S.C. § 103(a) over McKeown in view of Leibach be reconsidered and withdrawn.

CONCLUSION:


The Applicant submits that the foregoing amendments and remarks traverse and overcome the Examiner's rejections of Claims 21 and 23-28, and that Claims 21 and 23-28 are now in condition for allowance. Therefore, the Applicant respectfully requests that Claims 21 and 23-28 be allowed.

This Amendment is being filed via the U.S. Patent and Trademark Office's EFS-Web electronic filing system. No fees are deemed to be necessary; however, the undersigned hereby authorizes the Commissioner to charge any additional fees which may be required, or credit any overpayments, to **Deposit Account No. 502806**.

Respectfully submitted,

Date

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